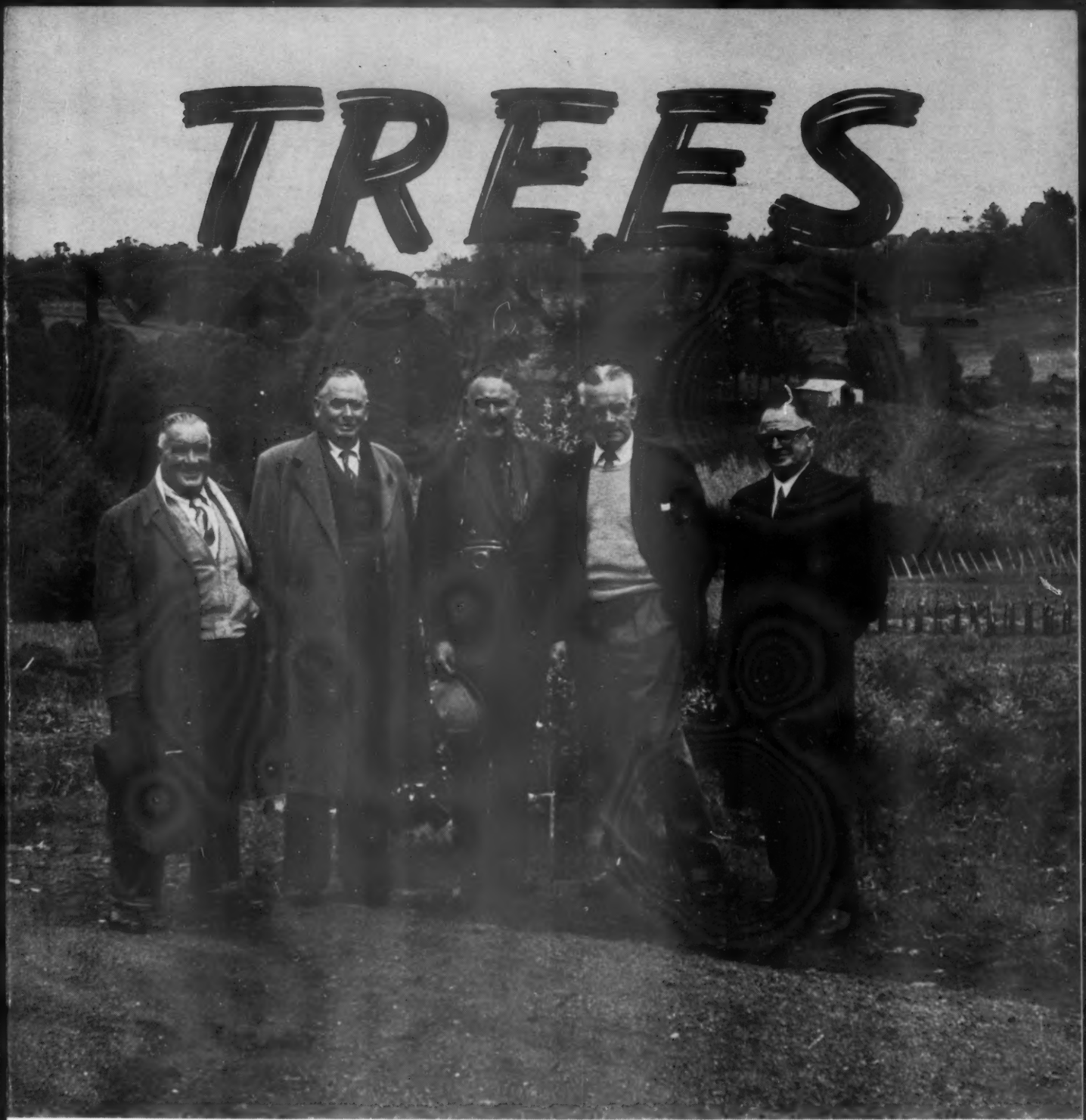
TREES



At Australian Royal Horticultural Society Tree Conference, Inspecting Melbourne city nursery; L to R, Tom Eagles, Supt. Pks., Preston, Theo H. Brunn, O.B.E. Pres. Royal Horticultural Society; Edward H. Scanlon; J. S. Owens, Director of Parks, Melbourne; Grattan R. Gould, Conference Sec'y.

National Shade Tree Conference, Minneapolis, Minn.—August 20-25

Maple Diseases — ***Ralph J. Green, Jr.***

A Safety Program — ***K. H. Daniels***

July-August, 1961 *The Journal of American Arboriculture* Vol. 21, No. 5

PICK A PAIR OF WINNERS

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Tailored® Trees

CRIMEAN LINDEN
(Tilia Euchlora)

Glossy small foliage of bright green coupled with a strong broadly pyramidal form makes this beautiful tree the equal of its better known cousin T. cordata. A tree of few faults and a delight to the eye. Should be used in at least a 6 Ft. treelawn to avoid sidewalk trouble. Under street conditions will probably not exceed 35 Ft. in 40 to 50 years. Plant 50 or 55 Ft. apart.

5-6 Ft. $4.50—6-8 Ft. $5.50
100 Lots—6-8 Ft. $4.95

Send Today for Reprints of our Norway and Red Maple Tree Charts

CLEVELAND MAPLE
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The Cleveland has an oval-upright form with an overall height of about 30-35 Ft., and spread of 20-23 Ft. The foliage is larger than the species, very dark, and the crown compact. Because of the small crown a heavy trunk or capillary system is not needed, thereby resulting in a smaller root spread. These factors all lead to lessened conflict with sewers and make it possible to use the Cleveland in a treelawn of from 4 Ft. to 5 Ft. upwards.

6-8 Ft. $5.00—8-10 Ft. $6.00
100 Lots—8-10 Ft. $5.25

If you wore a size 44 suit, would buy a size 40?

Of course you wouldn't! The suit would be uncomfortable, unsightly, and an expensive mistake. The same principle applies to tree planting.

A former city arborist had a formula for evaluating space factors that we'd like to pass along to you. Before he planted streets of trees he jotted down dimensions of street and tree lawn width, setback of buildings and aerial right of way. Then, to select trees that would fit the space available he made certain he knew the mature size and form of each different tree, its ultimate spread, and mature trunk diameter. Researching tree history took time, but the results were well worth his effort from both beautification and financial standpoints.

In the compilation of our catalog, "Use and Descriptive List of Tailored® Trees," we have tried to save some time for you, the busy arborist, by compiling important data about 172 species and varieties of Tailored® Trees. No one who reads our catalog needs to guess about dimensions of Tailored® Trees—and everyone who buys Tailored® Trees knows in advance the characteristics and growth habits of each selection.

If you are not on our mailing list, may we have the pleasure of an introduction? A postcard will do and we guarantee that the arrival of our catalog will be one of the highlights in your quest for reliable tree information.

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International headquarters for the world's most discriminating purchasers of street, ornamental and shade trees.

TAILORED TREES

Edward H. Scanlon & Associates

"Growers of Tailored® Trees"

7621 Lewis Road **Phone 235-3314**

Olmsted Falls 38, Ohio

TAILORED TREES

ALONG THE WAY With .... EDW. SCANLON

■ A note from Ed Brarmann informs us he has RESIGNED as SUPT. OF PARKS AT ENGLEWOOD, N. J. and has taken a position as SUPERVISOR OF FORESTRY for the combined JERSEY CENTRAL AND NEW JERSEY POWER AND LIGHT CO., with headquarters at Morristown. GOOD LUCK ED.

■ I note in a tree ad—"THIS TREE IS SELF BRANCHING." What the hell is that? YOU DON'T have to BORE HOLES in THE TRUNK and stuff BRANCHES IN! I thought so — THANKS. Or maybe the OTHER KIND is the species that MAKES TELEPHONE POLES!

■ My GOOD FRIEND and MINE HOST in AUSTRALIA, THEO BRUNN, president of the ROYAL HORTICULTURAL SOCIETY, was HONORED BY THE QUEEN on Jan. 1st with the ORDER OF THE BRITISH EMPIRE. Wear it in GOOD HEALTH THEO.

■ A note from YOUNG FRANK informs us that PAPA FRANK, in this case "CITY BROKE" HANBURY has sold his tree business and is TAKING THINGS EASY.

■ BILL JOHNSON, Badger Tree Service, BELOIT, has SOLD OUT and is going out to START DIGGING CAVITIES in SAHUAROS (cactus to you tender feet) Looks FROM HERE BILL that the job is TO PLANT TREES for some FUTURE GENERATION of skinners to work on.

■ It was with DEEP REGRET we learned of the SUDDEN PASSING of HELEN BORCHERS, the wife of WALT BORCHERS of the W. B. Clarke Nursery, San Jose, Calif. HELEN WAS A WONDERFUL, SWEET WOMAN and it is GRATIFYING TO KNOW she HAS BEEN IMMORTALIZED when some years ago a BEAUTIFUL FLOWERING PEACH, the "HELEN BORCHERS" was named for her.

■ One day in a PARK IN ATHENS—GREECE that is, not Gawgia—I saw a BUNCH OF EUCALYPTUS TREES. Not having seen one since my last trip to CALIFORNIA, I pulled off a FEW LEAVES and crushed them to INHALE THE FAMILIAR AND PLEASING ODOR—but this one FOOLED ME completely, it had the unmistakable odor of FRESH PAINT. Any one know the species?

■ About EVERY TWO HOURS nowadays my FEET START TO ITCH—that is the INTERVAL BETWEEN FLIGHTS of the BIG JETS out of the CLEVELAND AIRPORT. I'd like to be on one headed for HONG KONG—BANGKOK, or in fact any place.

■ In 1956 I planted a MT. ATLAS BLUE CEDAR (Cedrus atlantica glauca) in the GARDEN AT THE RANCHO. It grew BEAUTIFULLY until the BAD WINTER OF 58-59. It took a BAD BEATING. After my return from Europe that spring it BEGAN TO PERK UP and now is back on the beam, AND BEAUTIFUL.

■ A SMALL SPECIMEN of the GOLDEN MT. ATLAS CEDAR (C. a. aureum) planted in the SPRING of 58 gave more concern, but it CAME THRU without a murmur.

■ Visited the BEAUTIFUL FORMAL GARDENS AT NIAGARA FALLS, ONT. last June. WHY DON'T WE HAVE SOMETHING LIKE THAT? The sheared yews and Tilia cordata and platyphyllos—the globe elms—the row of pink horsechestnuts, the Camperdown elms GIVE AN EFFECT that is REALLY A TRIBUTE to the GARDENERS ART AND SKILL.

■ On the AMERICAN SIDE a HAMBONE PLANTING is going in. NO RHYME OR REASON to the "design," conventional trees, maples and oaks, that NO ONE WILL EVER LOOK AT TWICE. Ah well we must keep up the ARTY NATURALISTIC FEELING — that leaves everyone STONE COLD.

■ WAS SORRY to CUT SHORT my visit with JAKE GERLING IN ROCHESTER on a recent weekend, but a SIGN IN MY ROOM — which appeared to have been newly placed—gave the information that the ROOM RATES DOUBLED after the FIRST NIGHT. I couldn't bear to have that CONNIVER GETTING RICH off me so SADLY I LEFT.

■ There's a NEW "BOYSTOWN"—new name for the WHITE House. The KID AND ACADEMIC THINKING emanating therefrom is WACKY to be very generous in criticism. There should BE SOME MEN AROUND.

■ In the MARCH ISSUE of SHADE TREE NOTES—N. Y. State Arborists Association—on pages 7 and 8 is contained the MOST CONFUSING DISSERTATION we have seen on the USE OF TREES. The payoff of this CONGLOMERATION OF CONTRADICTION reached a highlight with this choice PIECE OF MISDIRECTION—"Choice of a single sturdy tree for community planting has much to commend it." I thought everyone had heard of DUTCH ELM DISEASE. It is a real pity that this sort of OBVIOUS UNEXPERIENCED "advice" is disseminated.

■ The same issue of N. Y. Shade Tree Notes is a masterpiece of MISINTERPRETED AND PROBABLY MISQUOTED INFORMATION, such as: "Small trees are interesting and sometimes useful (WHAT DO YOU KNOW). Heavy snowfall in autumn before leaves drop or later in winter, often ruin the beauty of small trees that lack good structural qualities. (DID THE WRITER EVER SEE A "TRADITIONAL TREE" SUCH AS HONEY LOCUST OR SILVER MAPLE OR ELM RACKED UP BY A HEAVY SNOWFALL — AND DOES HE KNOW HOW LONG IT TAKES TO SKIN HANGERS OUT OF A FOREST GIANT.) Some small trees badly injured in N. Y. state include Acer ginnala and Crataegus phaenopyrum." (These are two of the toughest trees in the book). This writer needs to get around more.

■ The DEATH OF DICK CARPENTER in May came as a DISTINCT SHOCK. For several years DICK has been DOING AN OUTSTANDING JOB on the publication "THE ASPLUNDH TREE," the house organ of the ASPLUNDH TREE EXPERT CO. The paper won't seem the same WITHOUT DICK'S good SENSE OF PERFECTION.

■ ON A TOUR around the CITY OF NIAGARA FALLS with TOM DiFRANCO, Park Super and CHET DAWSON, City Arborist, we saw a BEAUTIFUL STREET of SMALL TREES. It was an ALTERNATE PLANTING of IDAHO LOCUST and PAULS SCARLET. It was in good scale—the PAULS WERE TAKING THEIR TURN FLOWERING. An outstanding example of what can be DONE WITH IMAGINATION.

■ Then TO TOP IT OFF I TOOK some PICTURES and of all the rolls of film that have gone thru that Contaflex all over the world, I WOULD HAVE TO GOOF and TEAR THE FILM in winding. So maybe TOM AND CHET can get me some pix of first the IDAHOS AND THEN THE PAULS in bloom next spring. THANKS KIDS.

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Vol. 21 Bi-Monthly No. 5

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TREES MAGAZINE
7621 Lewis Road,
Olmsted Falls 38, Ohio

The Editors of TREES invite discussions, comments and all type of literary materials pertaining to trees and tree preservation from any person engaged either in the scientific advancement or commercial development of the field.

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TREES Magazine is a bi-monthly Journal published at Olmsted Falls, Ohio, by Edward H. Scanlon, and is devoted to the advancement of knowledge in the aesthetic and functional uses of exotic and native ornamental trees; to the advancement of research in pathological, entomological and physical disorders of ornamental trees; and to the education of the public to the advantages and need of using trees properly, both aesthetically and functionally. TREES Magazine is dedicated to the furtherance of the technical and business administration of Trees (Street and Ornamental); and Parks (Municipal and National) in the U. S. Scanlon Publishing Co., 7621 Lewis Road, Olmsted Falls, Ohio. Subscription by mail $3.00; outside United States $3.50. Advertising rates upon inquiry. Closing date for advertising copy—10th of month preceding date of issue. Unsolicited manuscripts must be accompanied by return postage.

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7621 Lewis Rd., Olmsted Falls 38, Ohio

June S. Faulds, Ass't. Editor
Telephone 235-3314

"No place is complete without trees. A home without trees is charmless; a road without trees is shadeless; a park without trees is purposeless; A COUNTRY WITHOUT TREES IS HOPELESS."

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Out On A Limb

TOO LITTLE AND TOO LATE

It is ironic that the only publicity that has been afforded trees, or as in this instance, tree planting, had to come as the result of a painful injury suffered by the President of the United States while planting a tree commemorating his historic visit to Ottawa, Canada on May 16th of this year.

Such publicity is good much as we deplore the painful results suffered by the President at this critical time when he so badly needs every bodily facility working in high gear. But it happened so let's go on from there.

The newspapers have been quite remiss in their coverage of trees and their indispensability to cities and people. That is until a beautiful park area or notable street has been destroyed then they weep and wail for two editions, or maybe its three, we are not sure what the rule is concerning trees. Of course with a gambling joint or house of prostitution they give front page coverage at least six or seven editions. That is news.

On the other hand knowing as we certainly should the earthiness of the press, maybe they are not 100% to blame. Certainly the horticultural organizations should have an adequate, not the present inept, horse-and-buggy public relations setup, and should be feeding the press with good wholesome releases on plants, their use, their history and background, and the ten thousand and one other fascinating stories that abound in the world of plant life. The public relations efforts of our leading horticultural organizations are nothing. And in an age and time when great strides could be made to introduce the millions of new suburban gardeners to the pleasures of real and interesting exotic materials, they plod along content to watch their members get rich selling the same old things that has every house looking like the next one and looking like they had been landscaped on an assembly line.

A few weeks ago tho there was a big flurry by the powers that be over the phoney advertising put out by a nursery extolling the imaginary virtues of the smelly Ailanthus—a campaign that started two years ago (see page 3, Vol. 19 — No. 4, May-June issue of TREES) and which the too tired big executives are just getting around to trying to squelch—and why?— because the public was being bilked?—not likely—most likely because some of their members were losing sales—this took about two years to build up. It wasn't horticultural consideration; it was cash register.

We feel that studies should be made of European practices, then blended with American conditions, before beginning a real public educational program. In the past it would seem that too much consideration and slanting of publicity has been in the direction of immediate sales rather than toward the realization of a well rounded field of horticulture.

This scheme will probably receive little consideration because it would create few millionaires, but might result in a much more beautiful America—but who cares about that?

Branches of The Law

By Howard Newcomb Morse

Counsellor at Law of the Supreme Court of the United States of America

"The Burrowing Nematode and Avocado and Citrus Trees"

A citrus plant disease known as "spreading decline" was first observed in citrus groves in Florida in 1928. Preliminary investigation as to the cause of the disease was begun in 1935; however, it was not until 1953 that scientists employed by the University of Florida identified a burrowing nematode (Radopholus Similis) as the cause of the disease. This microscopic worm feeds on the feeder roots of citrus trees and eventually destroys much of the lower root system of the tree.

The trees do not die, but poor foliage develops and the productivity of the tree is diminished, both as to the size and quantity of the fruit produced.

In 1955, the Florida legislature enacted a law finding that the Florida citrus industry "is now faced with the most serious emergency it has yet encountered because of spreading decline, resulting from a burrowing nematode," and empowering the State Plant Board "to join with the U. S. Department of Agriculture or to proceed independently in a program to control and eradicate wherever possible, spreading decline." The statute appropriated $1,756,300 for the use of the State Plant Board "in controlling spreading decline" and $90,800 for additional research on spreading decline.

Pursuant to the act and the authority contained in another law to "declare a dangerous insect pest or disease to be (a) public nuisance as well as any plant or other thing infested or infected therewith or that has been exposed to infestation or infection and therefore likely to communicate same," the State Plant Board in 1956 adopted a rule declaring the burrowing nematode and each citrus and avocado tree or plant infested therewith to be a public nuisance, and each grove and nursery in which infested plants of avocado, citrus or other plants are found, to be the center of an infested and dangerous zone.

The rule further provides that, after the burning in the infested zone of all infested citrus and avocado trees or other plants located in the infested or dangerous zones "plus the first four trees past the last visibly affected tree, or two trees past the last tree in the roots of which burrowing nematodes are found, or all host plants within 50 feet of the last known infested tree or plant, whichever is the greater distance."

The rule further provides that, after the trees are removed and burned, the soil must be treated with D-D soil fumigant and "said treated land must be kept free of host plants of said burrowing nematode for two years from date of treatment, except by special permission from the State Plant Board; provided, however, that control and research personnel, acting under the direction of the Plant Commissioner, may carry on such experiments

(Continued on Page 23)

Missouri Claims Largest Mulberry Tree

This is the official National Champion Mulberry Tree as listed in the American Forestry Association records. The tree is growing along Missouri State Highway 176, some 25 miles south of Springfield. This mulberry measures 14 feet, 10 inches circumference at a height of 4½ feet and at that point is four feet, eight inches in diameter. It is 38 feet high and has a crown spread of 74 feet. This picture was taken by Mr. W. A. Kingman, staff writer for the Ozarks Mountaineer, and called to our attention by Mr. R. M. Forbes of Smith Center, Kansas.

Pennsylvania Added To NAD States

Harry J. Banker, national executive secretary of the Committee for National Arbor Day, reports that Pennsylvania has become the 16th state to enforce legislation which sets Arbor Day as the last Friday in April.

"Congratulations must go to Jack Keneally on this job," Mr. Banker said, "he practically carried the ball on this touchdown singlehandedly."

"While the Pennsylvania action is heartwarming, we are quite distressed about what is happening in Washington," said Edward H. Scanlon, president of NAD. Mr. Scanlon said it appears that an idea is being entertained to table House Resolution 118.

H.R. 118, introduced Januay 12, 1961 by Congressman Hugh J. Addonizio of New Jersey, would hasten the time when Arbor Day could be observed nationwide with proper and due acclaim. The Resolution calls for the President of the United States to annually proclaim the last Friday in April as Arbor Day.

The resolution has been referred to the House Judiciary Committee whose chairman is Congressman Emanuel Celler of New York. If you would like to help in the crusade to bring trees into the spotlight, make your support known to Congressman Celler or any of his committee members who are:

Democrats: Francis E. Walter, Pennsylvania; Thomas J. Lane, Massachusetts; Michael A. Feighan, Ohio; Frank Chelf, Kentucky; Edwin E. Willis, Louisiana; Peter W. Rodino, Jr., New Jersey; E. L. Forrester, Georgia; Byron G. Rogers, Colorado; Harold D. Donohue, Massachusetts; Jack Brooks, Texas; William M. Tuck, Virginia; Robert T. Ashmore, South Carolina; John Dowdy, Texas; Lester Holtzman, New York; Basil L. Whitener, North Carolina; Roland V. Libonati, Illinois; J. Carlton Loser, Tennessee; Herman Toll, Pennsylviana; Robert W. Kastenmeier, Wisconsin; and M. Blaine Peterson, Utah.

Republicans: William McCulloch, Ohio; William E. Miller, New York; Richard H. Poff, Virginia; William C. Cramer, Florida; Arch A. Moore, Jr., West Virginia; George Meader, Michigan; John V. Lindsay, New York; William T. Cahill, New Jersey; John H. Ray, New York; Garner E. Shriver, Kansas; Clark MacGregor, Minnesota; Charles McC. Mathias, Jr., Maryland; James F. Battin, Montana; and James E. Bromwell, Iowa.

Root and Trunk Diseases of Maples

By Dr. Ralph J. Green, Jr.

Associate Professor
Dept. of Botany & Plant Pathology,
Purdue University

Before considering the specific diseases that may impare or disfigure the root and trunk systems of the maples, it is well to put our subject in prospective. First, we are concerned with a forest tree that has been adapted for shade and ornamental planting. It is a species well suited to a wide range of environmental conditions but the concern of the arborist and horticulturist has emphasized such characteristics as the shape and form of the leaf canopy, growth habit, richness of fall color and the shape and size of its leaves. Many disease problems that are of little concern with the maples as forest trees become important in its adapted role as an ornamental.

For all their beauty, however, city trees are no weaklings. It is sometimes surprising how well they survive the artificial and adverse conditions under which they must grow! Smoke and gasses, physical injury, disrupted water tables, hard packed soils, lack of humus renewal and mulch, inadequate root space, excessive heat in the summer and glacial winter winds through the wind tunnels formed by streets and buildings are just a few of the conditions under which the street tree must grow. In addition, seldom is a sewer, drainage or utility line put in a tree-lined street but that some root or trunk damage is done. Severe pruning and topping may expose the major scaffolding branches to sunscald and disrupt root-top water balances.

It is into this environment that we plant the many species of maples that are prized so highly and, as we shall see, the conditions under which the tree must grow is one of the principle factors contributing to the incidence and severity of disease. The familiar problems of winter sunscald, drought, mineral deficiencies, winter injury, leaf scorch and others are all the *direct* result of an adverse environment. Equally important is the role that the environment plays in parasitic diseases. Arborists and horticulturists need not be reminded that a tree growing under adverse conditions is more susceptible to attack by disease and insect pests. Thus, some of the disease problems to be discussed are difficult to assess, so far as importance is concerned, unless the condition of the tree is known and consideration is given to the existing environmental conditions.

For convenience, the disease of the root and trunk systems of maples can be placed in one of the following categories:

1. Twig and branch dieback.
2. Branch and trunk cankers.
3. Root and trunk rots and cankers.
4. Vascular wilts.
5. Heart rots.

The general characteristics of each group will be discussed and representative diseases presented.

Twig and Branch Die-Back

The die-back disease of maple usually involves only the terminals or new growth of older branches. The symptoms include necrosis and browning of both the leaves and branches, usually as new growth begins in the Spring. Close inspection of the affected parts shows that the death of the infected tissues is the result of a sunken canker that girdles the twig or branch. The living tissue usually separates from the dead area, leaving a sharp line between these two parts.

Infection usually follows winter injury or a condition of low vigor. The fungi involved are weak parasites and seldom attack vigorous growth. In addition, the cankers are annual and a vigorous tree makes quick recovery.

There are several genera of fungi associated with maple die-back. These include *Phoma* sp., *Phomopsis* sp., *Sphaeropsis* spp, *Macroplodia* sp. and others. Infection and disease development is essentially the same regardless of the pathogen involved.

Direct control of die-back is seldom necessary except as routine sanitation and pruning. Young trees or trees in low vigor may suffer considerable loss of leaf area in seasons favorable for die-back infection.

Branch and Trunk Cankers

The canker diseases that involve the major branches and trunk of maples are important because infection is perennial and the cankers disfigure the tree, slow growth and reduce mechanical strength. There is usually considerable swelling and irregular growth of the branches and trunk area involved, caused by excessive callus growth.

There are certain characteristics of canker development that are common to all canker diseases of maples. These are as follows:

1. Infection invariably originates at a wound or dead branch where the inner bark and cambium is exposed.
2. Regardless of age of the tree, canker infections involving the trunk occur when the tree is young.
3. The pathogen involved usually grows rapidly enough to maintain its position in the sapwood but seldom girdles and kills the main branches or trunk.
4. Trees that are cankered are disfigured and lose considerable mechanical strength. Such trees are subject to wind and ice damage and other mechanical injury.

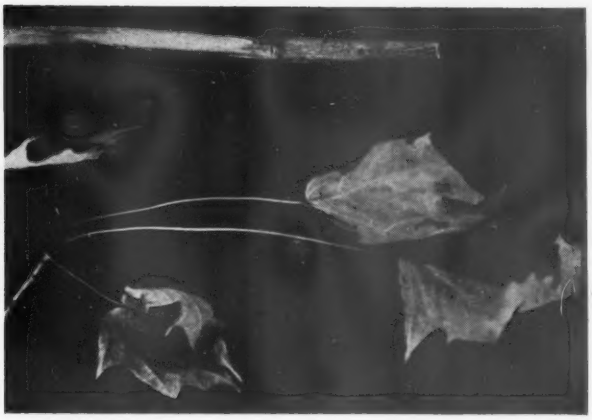
The most common and destructive canker disease of maples in the Midwestern region is Nectria canker caused by *Nectria galligena.* This disease is widespread in both Europe and North America and the name "European Canker" is sometimes used. The host range includes all species and varieties of maples, with red maple especially susceptible. The aspens, beech and the birches are also severely damaged.

The older and larger cankers are conspicuous and may be target-spot in shape, with the bark sloughing off, exposing underlying ridges of callus. Young cankers are easily overlooked. The initial symptoms include small, depressed areas in the bark in the vicinity of a wound or branch stub. The affected area is usually darker in color and water-soaked. In older cankers, small, red colored fruiting structures (perithecia) of the pathogen may be found.

The fungus requires a wound or dead host tissue for infection and penetrates as deeply as the cambium. The mycelium colonizes the inner bark in a tangential plane and there is usually repeated layers of callus formed by the host plant. These are successively invaded by the fungus to produce the canker.

The control of Nectria canker and other canker diseases is accomplished by good care and maintenance and by careful pruning. Conspicuous cankers on branches can be removed but cankers on the trunk are difficult to eliminate. Since infection occurs through wounds or branch stubs, prompt attention to mechanical injury and careful pruning is essential.

Eutypella canker, caused by *Eutypella parasitica,* is often destructive as a trunk canker of red and sugar maples. The



Symptoms of Verticillium wilt disease of maples. This picture shows the characteristic in-rolling of wilted leaves and the vascular discoloration associated with Verticillium wilt disease.

The mushrooms of the shoe-string root rot fungus Armillaria mellea (Vahl.) Quel. These structures appear in the Spring or Fall from the base of the trunk or from infected roots.

canker is conspicuous and usually occurs near the ground level. The bark remains attached to the wood and there are broad, slightly raised concentric rings of callus. The canker is elongate in shape and may reach five feet in length. A dead branch stub is usually found in the center of the canker, marking the point of initial infection. Heavy white to buff-colored mycelial fans are found at the margin of the canker beneath the bark. The canker may persist for many years but trees are seldom killed. Such trees are liable to breakage at the canker.

There are numerous other branch and trunk canker diseases that are found occasionally on maples, including *Cytospora* canker, *Strumella* canker and others. Infection and the disease cycle, in each case, are similar.

Root and Trunk Rots and Cankers

There are two destructive canker diseases of maples that involve the roots and lower trunk. These are Basal Canker disease of Norway maple and Bleeding Canker of Norway, red and sugar maples. Both are usually fatal within one to two years after infection. Infected trees exhibit poor leaf development, a thin crown and excessive die-back and wilting of branches. Extensive cankers develop at the root collar and lower trunk.

The Basal Canker disease is characterized by reddish-brown discoloration of the inner bark, cambium and sapwood in the cankered areas. The tree is killed when the entire root system is involved or the cankers girdle the trunk.

The casual organism of Basal Canker disease is *Phytophthora cinnamomi* and is soilborne. The pathogen is especially prevalent in poorly drained soils. Trees in low vigor due to poor site are especially susceptible to infection.

No effective control of this disease is known. Prompt attention to frost cracks and mechanical injury near the base of the trunk is important. Trees in low vigor should be fertilized and watered.

The Bleeding Canker disease of Norway, red and sugar maples is named for its most characteristic symptom, the oozing of sap from cracks overlying cankers in the bark. The inner bark, cambium and sapwood develop red-brown colored lesions with a distinct olive-green border that extend from the infected roots to the dying branches. The leaves and branches may wilt due to toxic substances produced by the pathogen.

The causal organism of Bleeding Canker disease is *Phytophthora cactorum* a close relative of *P. cinnamomi.* This pathogen is also soilborne and most prevalent in heavy, poorly drained soils.

There is no known control for this disease but considerable work has been done in treatment by injection of the dye Helione orange. This chemical will inhibit growth of the fungus and inactivate the toxin produced. Treatment may be effective only so long as the chemical is applied and the symptoms usually reappear later.

Symptoms of Nectria canker disease of maples. Note the concentric rings of callus and the stem swelling. (Photo by F. C. Strong, Michigan State University.)

The most common root rot disease of the maples is the Shoe-string or *Armillaria* root rot. Trees in low vigor or under unfavorable site conditions are especially susceptible.

The symptoms of this disease include a somewhat nondiscript decline; however, the *signs* of infection are easily recognized. The pathogen produces extensive rhizomorphs and white mycelial fans beneath the bark of the roots and lower trunk. In the late summer and fall, abundant honey colored mushrooms may be produced in clusters at the base of the infested tree.

The control of Shoe-string root rot includes both direct and indirect measures. It is suggested that this disease is limited principally to weak trees and that the pathogen *Armillaria mellea* is a weak parasite. Good maintenance and care to preserve high vigor is important. With trees already infected, the root rot may be checked by removing the soil from around the root collar and pruning the infected roots or cleaning the roots by removing the disease bark. Pruning cuts should be carefully protected with a good tree paint. The soil is not replaced around the root collar until late summer to allow healing of wounds.

Replacement of trees killed by *Armillaria* root rot presents certain problems because of the extensive host range of this pathogen. The soil and roots of the killed tree should be removed and the soil replaced. A more effective method of eliminating the fungus from the soil is chemical treatment with formaldehyde drench, carbon disulfide or Vapam. The soil must be thoroughly aired before replanting.

Vascular Wilts

Verticillium wilt disease is highly destructive to the maples and is reported from more than 300 different species of plants. Maple wilt, as the disease is commonly called, has probably

(Continued on Page 24)

Tree Happy Business Districts

Tubs, Pots, Barrels, Boxes— they're part of the asphalt jungle transformation!

By JUNE S. FAULDS

From New York to Los Angeles, Main Street U.S.A. is dressing in green!

Why? People like it!

Our editor aptly described the turn of events in an editorial (TREES, Sept.-Oct., 1959) when he said: "After moving heaven and earth to uglify downtown areas and succeeding exceedingly well in chasing people out of the hot, ugly downtown sections, the business people in their frenzy to attract people back are turning to what—oh my goodness, trees."

A study of declining business districts (as well as areas requiring slight rejuvenation) indicates that one of the first requisites for improvement includes some form of plant material.

Planting however, poses a problem at times because most cities do not have tree lawns(areas between sidewalk and curb) in the business district, and in many instances there are basements beneath the sidewalk, public utility cables underground, or some other obstruction to hinder in-ground planting. For these reasons, and probably others, container tree planting has soared to prominence and is now considered a highly desirable and very popular beautification effort.

Tree containers come in various sizes and all sorts of shapes: square, round, round flared, octagonal and triangular. While the most popular material is concrete, containers are also made of metal and redwood.

A tub planting on Fifth Avenue, New York City, features a variety of plant material: Japanese Holly (Ilex cernata mecrophylla), London Plane (Platanus acerifolia), and English (Hedara helix). Ginkgo trees are also planted on this street.

A Washington Hawthorn (Crataegus phaenopyrum) is shown on East Gay St., Columbus, Ohio.

California cities probably were the first to start container street planting since some examples go back 20 years (TREES, March-April 1961, "A survey of Trees & Shrubs Growing in Containers on City Streets in California" by Maunsell Van Rensselaer and William B. Davis).

One of the newest big city plantings took place in New York City this Spring. London Plane and Ginkgo trees were planted on Fifth Avenue. This was in conjunction with the city's "Salute to Seasons" program in preparation for the New York World's Fair.

Ceil Holton, administrative secretary of the "Salute to Seasons" committee, said the Manhattan plantings are colorful throughout Spring and Summer. Chrysanthemums, trailing ivy, evergreens, tulips and shrubs are used to complement trees. All plantings are made in precast concrete tubs ranging in size from 3½ feet to 5 feet.

Portland Leads With 574

One of the largest plantings in a business district was made in Portland, Ore. in 1959—574 trees were planted in round concrete containers. The area covers 64 blocks. Inspiration for the arboreal project was partly attributed to the fact that Oregon was celebrating its Centennial year as a state.

At the inception of this project, Hilmar Grondahl, chairman of the Portland Art Commission, said, "The Art Commission is, of course, interested in the visual effect of trees in the downtown area, but there are other plus factors. With surveys indicating Portland's approach to a smog situation, one should remember the beneficial effect of 800 trees in the streets of the core area. One tree will give off many gallons of moisture in a single day, a condition which would tend to help in purifying the air. And there is no question about the comfort effect of trees in producing a cooling sensation in the hot weather and reducing sidewalk glare."

Downtown malls came into the spotlight in 1959 with the very first permanent mall in the country being opened in Kalamazoo, Mich. (TREES, Sept.-Oct. 1959). Nicholas Kik, superintendent of parks, and William Ver Meulen, city forester, made the observation that, This (the mall) is no place for common

(Continued on Page 24)

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TREE COMPANY
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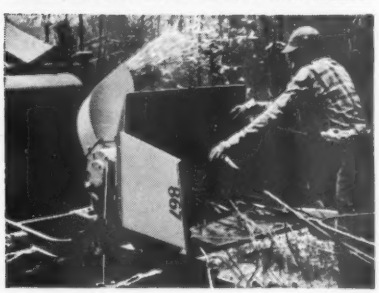
Davey Tree Surgery Co. Ltd.
San Francisco, Calif.



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On To Minneapolis— Host for the 37th NSTC

In Indian language, Minneapolis means "City of Water," and Gregory J. Lucking, general chairman of the 37th National Shade Tree Conference is shown taking full advantage of the meaning in his unique welcome to members. We understand that Mr. Lucking and his committee will move their offices from the yacht to Hotel Leamington, official headquarters for the conference, August 20-25.

By Gregory J. Lucking

General Conference Chairman
1961 National Shade Tree Conference

Minneapolis, scene of the 37th annual National Shade Tree convention, is the City of Lakes and Parks. Situated as it is, at the head of navigation on the Mississippi river some 1,942 water miles above the Gulf of Mexico, in south-central Minnesota, the city boasts 152 parks and 22 lakes and lakelets within its boundaries.

The site of Minneapolis was first viewed by Father Louis Hennepin, a Franciscan priest who, in 1683, carved the Coat of Arms of the King of France on an oak tree that grew on the bank of St. Anthony Falls. The first modern settlement came in 1819, when Fort Snelling was established at the junction of the Mississippi and Minnesota rivers for the protection of fur traders from the battling Sioux and Chippewa Indians. The famed Minneapolis park system contains the legendary "Falls of Minnehaha," from whose environs the inspiration for Longfellow's poem, "The Song of Hiawatha." The name, Minneapolis, is a contraction of Minnehaha, meaning laughing water and the Greek suffix, "polis" meaning city.

Serving as a doorway to the endless wheatfields of the prairies of Minnesota and the vast plains of the two Dakotas, Minneapolis early became the flour milling center of the world. The area of the city is 58.79 square miles, and the population is 482,872, according to the 1960 census, although the city is the center of a metropolitan area of 1,482,000 persons. The city is one of the most northerly of the large cities of the United States, being directly on the 45th parallel of latitude, equidistant between the equator and the north pole—a fact which makes Minneapolis' climate pleasingly mild in summer and stimulatingly brisk in winter. The mean annual temperature is 45.1 degrees; average annual rainfall is 24.71 inches; average annual snowfall is 42.4 inches.

Trees were highly regarded early in the city's history. In 1875, Charles M. Loring, who later became known as "Father of the Minneapolis Park System," attempted to stimulate tree planting in the city by offering money premiums for the best planting jobs. Loring later set up a system of uniform street tree

(Continued on Page 12)

General Program

SUNDAY, AUGUST 20

P.M.
12:00-5:00—Registration—Visit Exhibits.
1:30—Executive Committee Meeting
6:30—Executive Committee Dinner
Evening
8:00—Big Welcome Party and Ice Breaker
—N.A.A. Executives Committee Meeting

MONDAY, AUGUST 21

A.M.
8:30—Courtesy Coffee with the Exhibitors
—Registration
10:30—Opening of 37th Convention by Dr. J. C. Carter, N.S.T.C. President
—Welcome to Minneapolis
—Appointment of Convention Committees
11:00—"Tolerance of Trees to Soil Environment"—John C. Van Camp, Director, Midwest Shade Tree Consultants, Rockford, Illinois
P.M.
2:00—"Scale Insects"—Dr. Donald L. Schuder, Dept. Entomology, Purdue University, Lafayette, Indiana
3:00—"Decay in Trees"—Dr. Ray R. Hirt, College of Forestry at Syracuse University, Syracuse, N. Y.
4:00—"Sales-Service-Solvency"—Archibald Enoch Price, The Care of Trees, Glenview, Illinois
Evening—Open

TUESDAY, AUGUST 22

A.M.
7:30—Past President's Breakfast
8:00—Courtesy Coffee with Exhibitors
8:30—Registration
9:30—"New Trees and Large Shrubs for the North"—
Dr. Leon C. Snyder, Head, Dept. Horticulture, University of Minnesota, St. Paul, Minnesota
10:30—Business Meeting
12:00—Noon—Keynote Luncheon
P.M.—Split Sessions
Section I—National Arborists Association
(Program open to all)
2:00-5:00—"Conserving Manpower" — Hyland R. Johns, Asplundh Tree Expert Co., Jenkintown, Pa.
—"Some Insurance Problems" — Karl Kuemmerling, Karl Kuemmerling Associates, Inc., Canton, Ohio
—Business Meeting
Section II — Municipal Arborists
(Program open to all)
2:00-5:00—"Shade Tree Law" — Howard I. Moore, Supt. of Parks, Minneapolis, Minnesota
"Landscape Design and Street Tree Planting" —
Felix K. Dhainin, Landscape Architect, Board of Park Commission, Minneapolis, Minnesota.
—Discussion Session
Evening
6:30—National Arborists Association
Cocktail Party
Dinner
Induction of Officers
Address
7:30—"Slide Parade" — Gadgets, Iedas, Problems and Gripes

WEDNESDAY, AUGUST 23

A.M.
8:00—Registration
—Paul Bunyan Early Bird Breakfast
9:45—Buses leave for Minnehaha Park and Commercial Equipment Demonstrations
P.M.
12:30—Outdoor Lunch
1:30—Commercial Equipment Demonstrations
4:30—Return to Hotel
Evening
8:00—Premiere Showing — "Trees and Their Care"
Film in color, produced by John Ott for the N.S.T.C.
Public invited

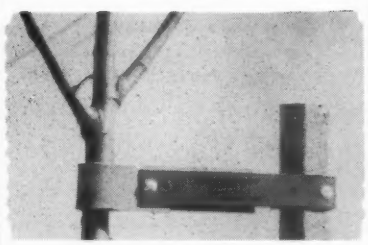
THURSDAY, AUGUST 24

A.M.
8:00—Courtesy Coffee with the Exhibitors
8:30—Registration
9:30—Public Utility Arboriculture
Moderator — George D. Blair, Forestry Consulting Services, Jackson, Michigan
—"Growth Inhibitors for Brush Control" — Hyland R. Johns, Asplundh Tree Expert Co., Jenkintown, Pa.
—"Tree Selection" — Vincent K. Bailey, President, American Association of Nurserymen, St. Paul, Minnesota.
—"Utility Tree Programs" — J. A. McLean, Ass't. Manager, Commercial Division, Wisconsin-Michigan Power Co., Appleton, Wisconsin
P.M.
1:15—Business Session
Standing Committee Reports
Election of Officers
3:45—"Insect and Disease Symposium"
Cytospora Canker—Dr. David French, Dept. Plant Pathology, University of Minnesota, St. Paul, Minn.
—Dutch Elm Disease Control in Municipal Areas—Dr. Dan Neely, Illinois Natural History Survey, Urbana, Illionois
—Zimmerman Shoot Moth—Dr. Alec Hodson, Dept. Entomology, University of Minnesota, St. Paul, Minnesota
—Sycamore Anthracnose — Dr. Eugene B. Himelich, Illinois Natural History Survey, Urbana, Illinois
Discussion
Evening
6:30—Cocktail Hour
7:30—Annual Banquet:
Entertainment and Dancing

FRIDAY, AUGUST 25

A.M.
7:30—Executive Committee Breakfast and Meeting
9:00—Boat Trip on Legendary Lake Minnetonka and Visit to Famous Estates along Lake Shore.

Paul's Tree Brace
Pat. Pending



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FAMILY PRICES

N. S. T. C.

(Continued from Page 10)

planting in 1887.

Today, the city contains some 100,000 street trees, the majority of which are American elms, but in late years, a diversified planting program has been introduced to include hackberry, maples, ash and basswood. A municipally-sponsored trimming program covers every section of the city each five years, with the cost borne by the owners of the benefited property.

The park system of 5,500 acres contains some 400,000 trees of native varieties. Ample opportunity is offered visitors to easily view the plantings in the Minneapolis parks, as the system contains 63 miles of parkways, including the Grand Rounds park boulevard, which connects all of the larger park areas and nearly circumscribes the city.

The Minneapolis government is the Mayor-Council type, wherein the City Council is the chief governing body and the Mayor, elected for a two-year term, has limited jurisdiction. The city has 1,000 miles of streets, and is intersected by six federal highways and nine state highways. The city, in common with a number of other cities in the country, is in the throes of a freeway construction program which will greatly reduce driving time within the city. Once the lumber capital of the world, the city is also eliminating its old "skid row" through an urban redevelopment program in which the older central part of the city is being entirely rebuilt under a $100 million rebuilding program.

Skyline view over Loing Park, Minneapolis, Minn. This park is one of 152 within the boundaries of the N. S. T. C. host city.

Transportation to and from Minneapolis is easy, with ten railroads, twelve bus lines and seven airlines serving the area.

A comprehensive year-round recreation program is offered by 62 playgrounds, geographically situated throughout the park system. There is a playground for every square mile of residential area in Minneapolis. The recreation system includes 47 baseball diamonds, 161 softball fields, 200 tennis courts, 16 bathing beaches, 34 wading pools and 11 private and five municipal golf courses.

The visitor to Minneapolis is impressed by the number and variety of beautiful churches the city affords. Four hundred twenty churches and synagogues—one for every 1250 persons — grace the city's neighborhoods. The city's population, great numbers of whom are of Scandi-

(Continued on Page 19)

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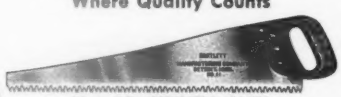

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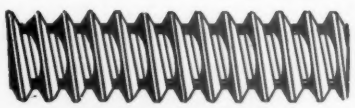

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Australian Shade Tree Conference

Last Stop for The Wandering Arborist

By Ed Scanlon

I was scheduled to arrive in Melbourne Oct. 2, 1960 for my lectures on Street Tree Management before the Australian Shade Tree Conference, which was held under the auspices of the Royal Horticultural Society — and to which meeting I had been the first foreigner invited to participate.

I had a jet flight on a B.O.A.C. Comet. It left Singapore in the evening (the early part of which I dawdled away drinking Singapore Slings at the famous Raffles Hotel). The first stop on this 4600 mile hop was at Jakarta in Java. From there we jumped across a hunk of the Pacific to Darwin, Australia. There I was welcomed. But not exactly as I had hoped.

Tristania conferta, Brush Box on Flemington Road, Melbourne, Australia.

The head of the welcoming committee was the medical examiner. He informed me my medical certificate was not acceptable. Then he left me standing there thinking. The first thought immediately went back to my "deportation" from Baghdad, for not having a visa. Thinks I what's not having a visa compared to being unpure or contaminated or just plain diseased. These thoughts were bouncing around fast, like signals off the moon. Will I have to pay for my own deportation, as I did at Baghdad? If so I had bad news for someone, I was running short of cabbage and if they tried to send me back to Singapore some one was going to have to float a loan.

Finally the ogre grunted and I asked what was wrong — some fifteen or twenty countries had accepted my credentials. This bloke then proved that the U. S. does not have a corner on the bureaucrats. Altho he admitted the signature and stamp of the Doc who scratched me for Smallpox was O.K., the county medical officer had not signed it, so he would have to ask me to be vulcanized. I told him to start scratching and that was that. But the funny part of it was they must put Kangaroo juice in their serum. Of all the times I have been vaccinated for smallpox this was the only one that took. The next stop—a short one—was at Sidney, then Melbourne.

The welcoming committee was real and cordial. As I came thru Customs I spotted them in spite of the crowd. Theo Brunn O.B.E., President of the Royal Horticultural Society, Grattan Gould, the Society Secretary and R. N. Cheeseman of the Shade Tree Conference Com-

Closeup of an island planting of London Plane on Exhibition Street, Melbourne.

Full view of centrally planted Planes, Exhibition Street, Melbourne.

Address by guest speaker, Edward H. Scanlon, at Burnley Horticulture College during Shade Tree Conference; L. to R. G. R. Gould, Secy. Cr. C. J. Brens, O.B.E. Chm., Parks and Gardens Committee, City of Melbourne; the speaker; J. S. Owens, Supt. Parks and Gardens, Melbourne; T. H. Brunn, O.B.E., Pres. Royal Horticultural Society; Roy Grounds, Architect; R. T. M. Pescott, Dir. Melbourne Royal Botanical Garden; F. Read, Director of Agriculture.

mittee. On our drive into Melbourne I suddenly spotted a Kwanzan Cherry in full bloom—this was October 2 and it was a bit difficult to become oriented to this upside down season thing. A little further we saw flowering peaches, then a street of Ashes that impressed me as the Nim tree (TREES, Vol. 21—No. 3) had in Pakistan and India, it was the Desert Ash (F. oxyacarpa) native of Asia Minor. It is a small tree. None of the trees I saw on any of the streets would exceed 25 or 30 feet. It has a splendid round head. A nice street of the Desert Ash was Adderly Road.

We arrived at the Australia Hotel on Collins Street, which was to be my home for the next week. This is a very nice comfortable hotel in the heart of Melbourne. The weather was quite chilly, as a matter of fact the reading was 67° and after the 90° to 100° and humidity I had left the previous evening in Singapore it was a bit of a shock. However anticipating this possibility I had packed a light woolen suit which felt real comfortable.

The following morning I was taken to the City Hall where I had the pleasure of meeting the Lord Mayor, Councillor Bernard Evans, Mr. J. C. Owens the Director of Parks and Gardens, and Councillor C. J. Brens, chairman of the Parks and Gardens Committee. This reception was most cordial and friendly and was a forerunner of the red carpet treatment these wonderful Autralians rolled out. As a matter of fact they almost overdid it. There is nothing wrong with Australian hospitality.

After the pleasant ceremony with the Lord Mayor there was nothing scheduled until evening when I was to give a short address at the opening of the Garden and Flower Show, so Jack Owens took me for a drive about the city.

My experience with trees in Southern California, where so many Australian trees are grown, stood me in good stead. The first familiar sight was a beautiful street of Tristania conferta, the Brush Box. It seems to grow smaller and more compact than those observed in California. There are few big trees used on Melbourne streets altho a street of English elms would seem to discount this statement. The trees did not have the usual form of U. procera; they were more round headed and only went to about 40 feet, and this at about 45 years of age.

The parks we viewed were carefully tended and contained numerous well selected species, but the recent rains made the ground much too soggy for tramping around.

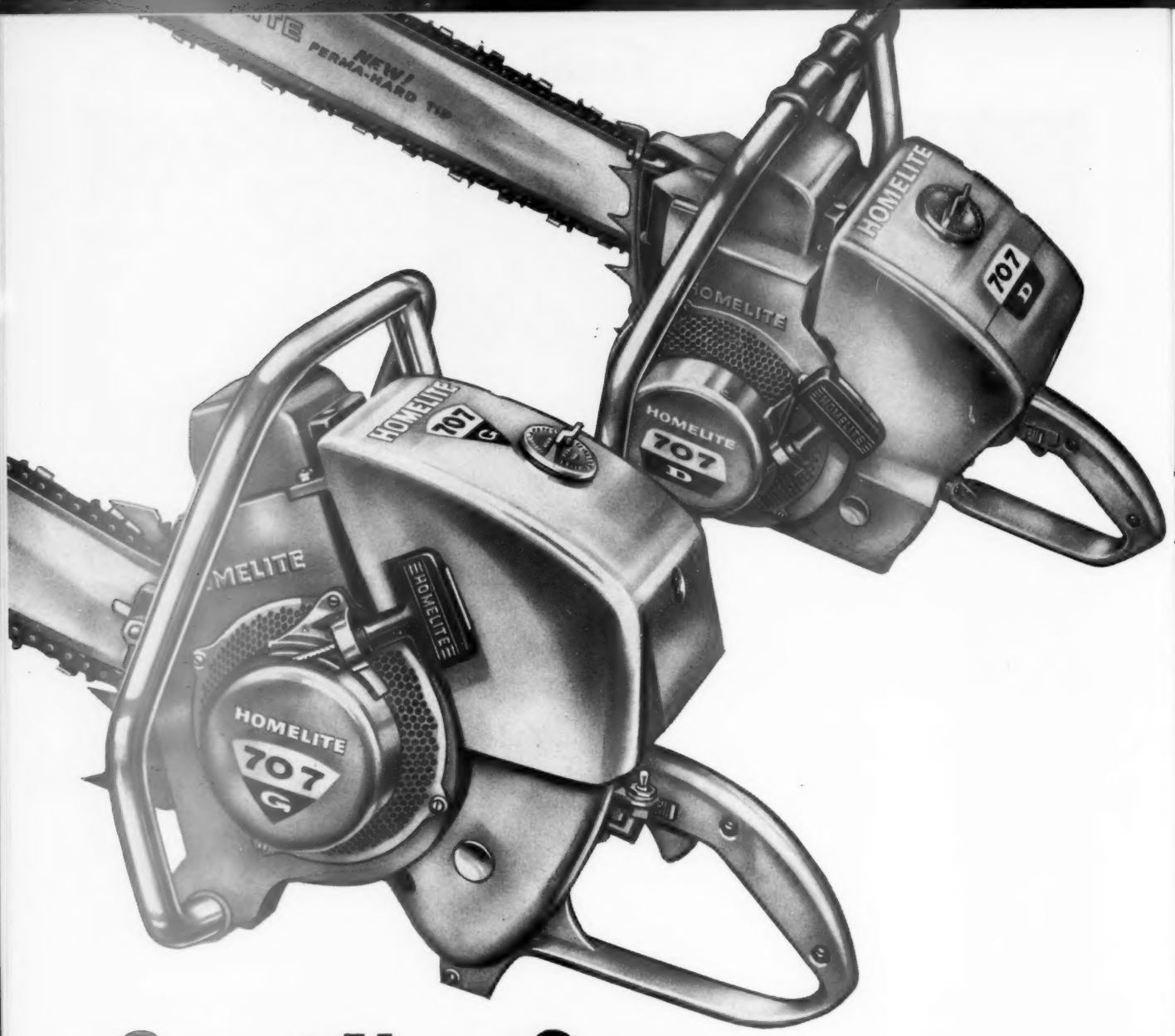
The following day turned out cold and wet and I was having the shakes. The heat I had enjoyed in Europe, the Middle and Far East was gone—long gone, although this shouldn't have bothered me too much, having endured the ups and downs of Cleveland weather for 16 years; but then we never have two months of 90° weather in Cleveland.

At noon in the Australia Hotel there was a sponsors luncheon. These were the representatives of business institutions in Melbourne whose cooperation had made possible the Shade Tree Conference. Present at the meeting were the following gentlemen; Mr. K. D. McPherson, the Melbourne Herald; Mr. E. N. Simondson, The Myer Foundation; Mr. B. H. Mackenzie, Dominion Pty. Ltd.; Mr. Hugh D. T. Williamson, Australia and New Zealand Bank; Mr. Hamilton M. Slagh, H. C. Slagh Ltd.; Mr. J. D. Brooks, A. P. M. Forests, Pty. Ltd.; Mr. E. Hunter, Standhill Pty. Ltd.; Mr. C. D. Allen, Vacuum Oil Pty. Ltd.; Mr. Roy Grounds, Messrs Grounds and Boyd.

After the lunch Grat Gould and Mr. R. T. M. Pescott, Director of the Melbourne Botanical Garden, took me out to this famed place. It is beautiful. Having seen the Monterey Cypress (Cupressus macrocarpa in its limited native habitat around Carmel California, it was astounding to see how this species has far exceeded in size anything ever produced in its homeland. One particularly nice specimen must have been at least 70 feet tall, beautifully proportioned and with a trunk diameter of at least 5 feet. Another interesting tree was *Paulownia Fortunei.* This tree had very large individual flowers which were white. It was a small tree of no more than 16′ - 18′ and did not appear to be one that would become anywhere near as large as *tomentosa.*

One amazing observation—suddenly it dawned on me that I had seen few Eucalypts, either on the streets, in the parks and not too many in the Botanical Garden. I was surprised that certain of the Eucalypts like E. cornuta-lehmanni, at least that is what it has been called in California, but I note Ernest E. Lord (Shurbs and Trees for Australian Gardens) separates them as E. cornuta and E. lehmanni. Regardless it forms a nice umbrella-like head and while it has not been used there nearly to the extent it should have—which is true of most good species all over the world, thanks to the overall delinquency of the nursery industry—it is a splendid tree. I suppose maybe it is a matter of familiarity breeding contempt but there did not seem to be too high a regard for their own.

An interesting event occurred during my visit to the Botanical Garden. Some years ago I had acquired a copy of Lord's "Shrubs and Trees for Australian Gard ens" and it was a distinct pleasure that Mr. Lord was one of the first persons I met on my arrival in Melbourne. It is an amazing book full of sound information and useful reference, but what hit me hard was a magnificient tree opposite page 94. It was in full flower—an immense tree with a 50′ spread and equal height, and located in the Botanical Garden. My first reaction to the picture, about eight years ago, was "wow, would I love to see that." So, I did. The tree is the Flaxleaf Paperbark (Melaleuca linariifolia — and if I had anything to do with street planting anywhere in Australia, wherever this gorgeous tree would be happy, you can be sure the streetscape would be much the brighter for having had this beautiful tree move in. This would apply with particular vehemence



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to the famous St. Kilda Road, one of Melbourne's most majestic avenues, where a misdirected appreciation of trees has held up the removal of many dangerous trees for years, and even some dead ones. And do you know the species that infests this fine street?—so help me I'm not lying — Silver Poplar — which is probably the champion of all weed trees. If they don't stop interfering with the authorities, who know their business, there will be a sequel to the "Murder In A Hanson Cab"(a novel concerning a murder that occurred on St. Kilda Road about the turn of the century). Only this one will be much easier to run down.

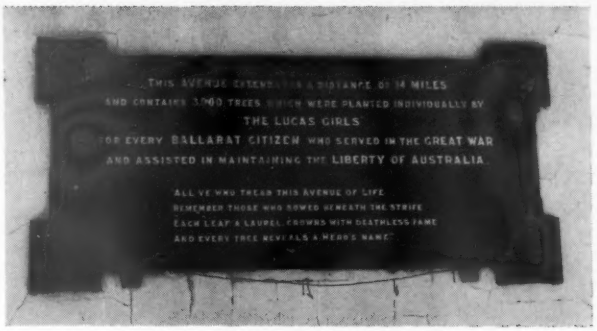
It was cold and drizzling as we walked around the garden and finally Mr. Pescott invited us to his home where Mrs. Pescott graciously prepared tea and scones, and with a bright fire in the fireplace, we enjoyed a memorable visit.

My one regret was the shortness of the visit to the Garden and the schedule that prevented my return. It definitely is not a place, like Kew, that one disposes of in a few paltry hours.

That evening we returned to the Garden and Flower Show and after a short time left to visit the Orchid Show. This was well attended and was a beautiful display.

Wednesday was cold and raining. Not exactly the best weather for picture taking. And much to my regret my Australian pictures are few and not too good. We left for the Burnley Horticulture College where we were greeted by the Principal, Mr. T. H. Kneen. This was a field day sponsored by the Institute of Park Administration of Victoria, and the Nurserymen and Seedsmens Association. After a rather damp tour of the beautiful grounds a luncheon was held and I was invited to address the group, which also contained many park directors from surrounding towns. It was a pity the weather was so nasty. It cut short my opportunity to look over more closely the many fine trees on the grounds of this outstanding institution.

The Avenue of Honor, dedicated to Australian soldiers who fell in W.W. I—at Ballarat.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AND ASSISTED IN MAINTAINING THE LIBERTY OF AUSTRALIA
ALL YE WHO TREAD THIS AVENUE OF LIFE
REMEMBER THOSE WHO SOWED BENEATH THE STRIFE
EACH LEAF A LAUREL CROWNED WITH DEATHLESS FAME
AND EVERY TREE REVEALS A HERO'S NAME

A sidewalk planting of Planes in downtown Sidney.

That evening the big public meeting of the Shade Tree Conference was held in the imposing new auditorium of the University of Melbourne. I was sorry I could not have had some of the slides I had taken recently on the first half of this memorable round the world trip.

Events piled on events. A visit to the Dandenong Ranges—a magnificent panorama of mountain ranges which is a part of the Great Durde (mountains) that runs thru Victoria, New South Wales and into Queensland. It is magnificent, and here in the deep canyons and mountain slopes I did see Eucalyptus in all their regal glory. They grow big there and with their white peeling bark create pictures too grand to contemplate.

We stopped at the Wandin Nursery operated by the City of Melbourne—a 46 acre plot where the city grows the type plants they find difficult to obtain in commercial nurseries. Then on to the Williams Nurseries at Kalista and a garden owned by Mr. John Pritchards. The garden specialized in proteas, tree peonies, rare trees and telopea (waratahs). It is a beautiful display.

In the evening there was a panel dis-

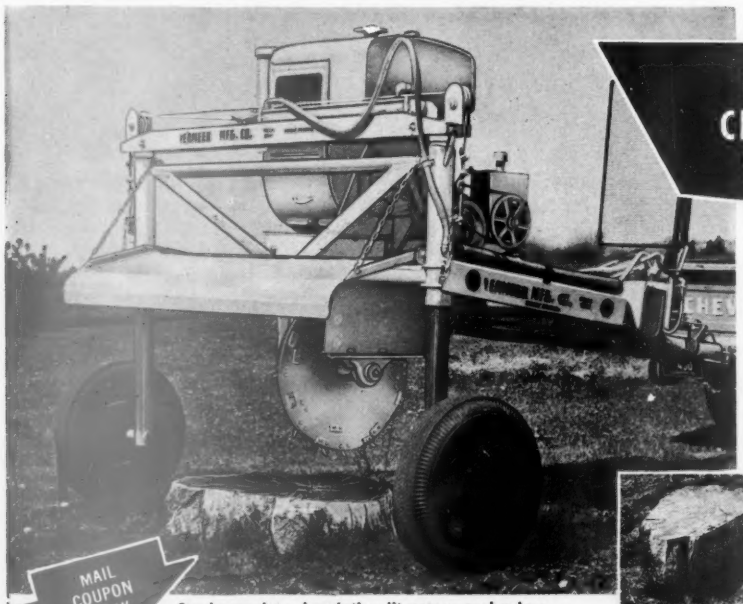
cussion held at the National Herbarium of the Royal Botanic Garden. My confreres on the panel were Mr. J. S. Owens, Director of Gardens and Parks, Melbourne, who spoke on "Suitable Tree Types For Planting on Melbourne Streets;" Professor J. S. Turner, the University of Melbourne, whose subject was "The Education of Tree Planters of Tomorrow," while my topic was "The Principles and Practices of Street Tree Management." It was a well attended meeting and elicited some worthwhile debate.

A trip to Camberwell, a nice city adjoining Melbourne. They had prepared a brochure for the occasion and Mr. K. G. Hunter introduced me to the Lord Mayor, Mr. F. A. Broussard. Also representing the city were Mr. L. F. Cheffers and Mr. H. L. Polglase.

A tour of street trees was really welcome. One street with Prunus blierana, was impressive, doubly so because it does so well in the U. S. In fact I think it is the best of the red leaved plums — its double pink flower is a standout. There were streets of Liquidambar, doing nicely; Pin Oak, giving the same maintenance headache with its pendulous branches; Eugenia Smithii, a very good thing; Pittosporum undulatum always handsome as it is in California; Angophora lanceolata and Melaleuca stypheliodes, of which there is an excellent street in Los Angeles.

A magnificent specimen of the weeping Ficus Benjamina in a park in Honolulu. We wish to thank Prof. Horace F. Clay of the Univ. of Hawaii for the identification of this tree. It is 150' wide and 50' tall.

A visit I had been quite anxious to make was to pay my respects to the widow of the late Councillor William Comeadow O.B.E. Mr. Comeadow had issued the original invitation to me to be the guest of the Royal Horticulture Society at this meeting. Mr. Comeadow was the founder of the Society 35 years ago and his sudden death early in 1960 stunned his many friends. So it was with a heavy heart that I paid my respects to his widow at her charming estate "Flinthill" which is situated about 30 miles from Melborune. "Flinthill" reminded



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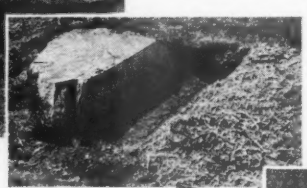

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Cocoa Palms on Kalakaua Blvd. in front of the Royal Hawaiian Hotel. Honolulu, Hawaii.

me of some of the lovely estates I have seen in England. We had a thoroughly enjoyable visit with Mrs. Comeadow, a walk thru the beautiful Eucalyptus studded about the grounds and after tea took our leave for the return to Melbourne.

My last day, Sunday, October 9th, was spent at Ballarat, a city about 100 miles west of Melbourne. This was the scene of the first discovery of gold in Australia. A strange coincidence occurred on my first night back in the U. S. I had been met in San Francisco by my old sparring partner Dana Bowers, Landscape Engineer for the State of California. We drove to Dana's home in Sacramento, and a bit later having picked up Mrs. Bowers, left to go out to dinner. We stopped at a restaurant, and as I got out of the car I noticed a sign that read "Sutters Creek"—the scene of the first gold discovery in California.

We were met in Ballarat by Mayor A. W. Nicholson, Mr. A. K. McBain, Supt. of Forests and Reserves and his son and assistant, Mr. L. McBain. Others attending lunch at the Craigs Hotel were; Mr. H. Maddern, Town Clerk; Mr. D. Mosman, President of the Ballarat Horticultural Society; Mr. K. Price, Chairman of the Arch of Victory (see pictures) and Grattan Gould, Jack Owens and Mr. and Mrs. Theo Brunn.

A tour to the Botanic Gardens, the Arch of Victory, various parks and the beautiful stands of Monterey Pine, Sequoia, sempervirens and Austrian Pine on the watersheds of the Ballarat water preserves were wonderful. But it was too much and too fast to absorb. There were so many fine trees at the Botanic Garden that I could have spent the whole day there. One tree I saw there was a lovely thing that I have growing at the Rancho —only here it had just burst into leaf, while at home it was going to sleep. It is the Golden European Ash. This is one of the finest golden leaved trees and compares favorably with Fagus Zlatia, the Golden Box elder and Ulmus carp. Wredii. Another nice tree observed in Ballarat was a nice 20 foot specimen of the Globe headed European elm (U. carp. umbrac.), and as they do not have Dutch elm disease in Australia they should grow this superb globe for streets.

I disliked leaving these wonderful people but I must say that after that hectic week it was not going to be necessary to rock me to sleep when I climbed aboard that Pan Am jet at Sidney.

After saying adieu to Mr. Bruce Matear, the genial manager of the Australian Hotel, Theo and Jack took me to the airport at 10 a.m. Monday where I boarded my flight to Sidney. And just think in eight days I didn't even see a kangaroo.

It was a magnificent visit Australia—I salute you and sincerely hope the day is not too far distant when I shall have the opportunity to return to your gracious hospitality.

N. S. T. C.

(Continued from Page 12)

navian and German descent are vitally concerned with the city's educational system. The result is that its 99 public schools and its several parochial institutions are among the finest in the United States. Within its boundaries is contained the University of Minnesota, one of the nation's foremost institutions of higher learning.

It is the home of the internationally-famed Minneapolis Symphony Orchestra, which has been adjudged by critics as one of the three top orchestras in the western hemisphere. Its annual summer celebration, the Minneapolis Aquatennial, attracts several hundred thousand visitors each summer. In its brand-new ultra-modern Metropolitan stadium the city, along with its sister city of St. Paul, went big league all the way this spring, adopting the erstwhile Washington Senators as their contender in the American League, with the brand new name of "The Minnesota Twins."

The University of Minnesota offers many sights for visitors, if you can go when things are open. Among attractions are the Northrop Auditorium, University Gallery, Coffman Memorial Union, Comstock and Pioneer Halls, the Minnesota Museum of Natural History, Memorial Stadium, and Williams Arena.

Two significant art galleries await the pleasure of convention visitors. The Minneapolis Institute of Arts, containing representative old masters and contemporary art objects, including one of the world's finest collections of jades; and the Walker Art Center, where the fine collection of the late Thomas Walker as well as a sprightly display of the new and the old in the world of art, are well worth a visit.

Minneapolis is a city of beautiful parks and lakes; it is a city of well-kept homes, with pretty green lawns, flower gardens, and above all, *trees*. Minneapolis is a friendly city. Its citizens like to have guests. Minneapolis is a wonderful place to visit. On a plaque located in Gateway Park, in the center of the city, is inscribed:

MORE THAN HER GATES,
MINNEAPOLIS OPENS HER
HEART TO YOU.

The convention committee and the citizens of Minneapolis look forward with pleasure to the chance to prove the truth of this statement to the delegates of the 1961 National Shade Tree Conference.

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AUG. 20-25

Save Money - - With A Safety Program

By K. H. Daniels
Engineering Dept.
Hartford Accident & Indemnity Co.

It is safe to say that everyone believes accidents are about as undesirable as the bubonic plague. Further, it is highly desirable to avoid them. By the same reasoning, nearly everyone agrees that accidents cost somebody suffering and financial loss. Thus logically if accidents can be prevented and suffering can be avoided, money can be saved. Obviously a safety program, if it has any degree of success, will be beneficial.

As these simple truths would appear to be entirely logical, every business should have a safety program. Indeed every business venture must have a program. It is, however, true that every business venture does not have a safety program. Indeed a great many do not have. Somewhere in all this "logic," there is some hokum or misbelief. There are those who for some reason are saying "We don't need a safety program."

Others have some form of a program and are seriously questioning its value. Their effort is not producing its objective. Instead of saving money, there is evidence they are losing money and very probably this is true.

With those who do not have a program, very probably the need is not recognized. Or, there is the feeling they are "too small" believing it would require a lot of meetings, unnecessary expense, etc. Those who have unproductive programs very probably have programs which have improper direction or improper emphasis. Such programs can have costs far in excess of benefits derived.

Misdirection and improper emphasis frequently occur due to inability to separate the thinking between an accident and a loss. Too often no effort is made to prevent an accident unless a serious human injury occurs. This might be illustrated by a ladder accident. Should a man fall from a ladder and sustain no injury, very likely he would gather himself up, brush off his clothes, reset the ladder and return to work. An accident occurs, it is not reported and no effort is made to prevent a re-occurrence of it. However, should the same accident occur and the employee receive very serious injuries, then a great deal of attention is paid to its prevention. Both of these accidents have identical causes.

The facts tell us that far more accidents without human injuries occur than otherwise. The first ladder accident is one of this group. Each accident will result in some type of loss. Obviously, a program which seeks to prevent only certain accidents to the exclusion of others will miss the loss prevention opportunity of the larger volume of no human injury accidents. Such misdirection and improper emphasis will produce only a slight return and fail to achieve the maximum result. As human injury accidents are fewer, there may be a false assumption that less of an effort is necessary or there may be the belief that there is no need for a safety program.

This is copy of a Supervisor's Investigation Report. The author suggests that complete reports of this type, even for seemingly trivial accidents, are important and will help to eliminate serious injuries in the future.

"Job Hindrances interrupt or interfere with the orderly progress of the job."

SUPERVISOR'S INVESTIGATION REPORT

Name	Age	Time	Date
John E. Brown	28	10:00 a.m.	3/25/60
Department — Shift	**Job**	**How long on this job?**	
Crew of Bill Johnson	Tree trimmer	2 years	

WHAT HAPPENED? — Describe what took place or what caused you to make this investigation.

Crew was stripping tree. The rope broke, dropping limb on roof and fatally injuring John E. Brown

WHY DID IT HAPPEN? — Get all the facts by studying the job and situation involved. Question by use of WHY — WHAT — WHERE — WHEN — WHO — HOW

1. The limb was not properly cut to a size that could be safely handled.
2. The foreman recognized the limb was too large.
3. The rope was rotted due to inadequate storage.

WHAT SHOULD BE DONE? — Determine which of the 12 items under EMP require additional attention.

Equipment	Material	People
Select	Select	Select
Arrange	Place	Place
Use	Handle	Train
Maintain	Process	Lead

1. Our job methods on stripping a tree need to be re-evaluated and replanned.
2. Importance of leadership by our foreman should be stressed.
3. Our maintenance program on ropes needs improvement.

WHAT HAVE YOU DONE THUS FAR? — Take or recommend action, depending upon your authority. Follow up — was action effective?

The problems have been brought to the attention of management. The problems have been discussed with Mr. Johnson and other foreman. Our tree stripping methods are being replanned in line with suggestions from the foreman. A meeting with management is planned to improve our foremen's leadership.

HOW WILL THIS IMPROVE OPERATIONS? — OBJECTIVE: Eliminate job hindrances

Our accident potential will be reduced. The quality and quantity of work will increase. Our relations with the public and our customers will improve.

Investigated by	Date	Reviewed by	Date
Henry Smith, Field Superintendent	3/30/60		

Form SRE-104 Rev. Printed in U.S.A. 8-59

It is apparent that any management should expect results. If their program is failing, its value should be questioned. There should be justification for their effort. Improper direction and emphasis could easily be frustrating and to abandon their program is an easy decision. However, before any program is rejected, there should be careful consideration of its objectivity. Is the program one which in its concept attempts the elimination of conditions responsible for all accidents? Does the program objectively seek the elimination of all losses which are draining away the profit dollar?

A business earns a profit from products sold, services performed or a combination of both. The margin of profit is the difference between gross income and operating costs. Losses add to the operating costs. The control, or better still, the elimination of losses is quite obviously important, unless the manager is such a financial genius that he can earn gross income faster than it can be lost!

Hidden Losses

Accidents actually are but one form of loss. Some resulting losses are obvious while others are "hidden" losses. These "hidden" losses very frequently are never determined. Though difficult to determine, they are nevertheless very real losses and it is important to find out why and how they occur. Their existence emphasizes the "need" of a program. This search must of necessity be made in the area of the company's operations. Sustained success requires careful and continued analysis of the company's operations as well as any improvements which are tried. Future needs will depend on this analysis.

Accidents are unusual in that they can influence both the net costs of the company's operations and the gross income. This thought will be demonstrated in an example.

The example is actually a combination of two very similar accidents. The facts were combined to provide more opportunities to illustrate the ideas just expressed. The accident occurred to a tree surgery company.

The tree surgery company signed a contract for the removal of a large dead elm tree which is located near a residence. Since the tree stands close to the building, it will not be possible to fall the tree. Instead the tree will have to be stripped and the sections of branches lowered to the ground by ropes. The company estimates one day will be necessary to cut

down the tree and to cut it into small sections suitable for firewood. Cutting the tree into firewood was intended as a public relations gesture by the company.

During the course of the work, one large limb is dropped on the roof of the dwelling and the branch subsequently bounces onto an employee causing a fatality. Some very important injuries and losses are immediately obvious from this accident. First of all, there is a fatality which in itself is most undesirable in any scale of values. Secondly, the damaged customer's roof does not create good customer relationships. These two results alone certainly emphasize the extreme need to prevent this accident.

Because of the spectacular nature of the two obvious results from this accident, the other types of losses which did or will later occur are overshadowed. Each of them is a "hidden" loss and will eventually cost the company certain numbers of dollars which will never be recovered. These are:

1. A delay in completion of the job.
2. Additional payroll costs to provide new employees.
3. Personnel problems.
4. Since the accident is of spectacular nature, local newspaper publicity will do serious damage to the public relations of the company.
5. The rope which failed was a loss of equipment.

The accident will affect the net operating costs. Loss of future gross income will occur from persons who may decline to contact the company because of the unfavorable publicity. While most of the major costs are easily ascertained, the "hidden" losses will be difficult to establish. If the fatality and the roof damage had not occurred, this accident might have gone unnoticed and would parallel the ladder accident previously mentioned.

Prevention

To prevent an accident of this type, it will first of all be necessary to establish the "responsible conditions" in the area of the job methods. So far as this particular accident is concerned, any preventive activities will have to be aimed at the tree stripping operations or methods which led to the accident. Thus logically an investigation must be made. The problems which will be noted in this investigation will establish what objectives should be pursued. The objectives will concern the "hidden" losses in quality, quantity, etc., as well as accident control. It is important that the investigation be done in an organized manner in order that no contributing factors will be overlooked.

Unless there is definite organization in the investigation, there is certain to be misdirection and improper emphasis in being objective. The corrective action from an unorganized investigation very probably would make slight or no attempt whatsoever to prevent all of the losses. The corrective action in the case of our example could conceivably be aimed only at the prevention of the two major losses, the fatality and the roof damage, and omit solution of the "hidden" losses. Some of the conditions responsible for the accident might even be overlooked. Thus the golden opportunity to achieve greatest savings in loss prevention and greatest reduction in the net operating costs is lost.

It could be said that the crew of our example accident was careless. We could say the ground man should stay out from under the load. It could be said also that the tree trimmer should lower the branches carefully, etc. However, none of these corrective measures would have prevented the accident. They would only lessen the severeness of the injuries. Such corrective action is an example of misdirection.

The accident in this case was the falling limb. It was unexpected and occurred suddenly. It hindered the successful conclusion of the job. The "responsible conditions" can be easily uncovered by organized investigation techniques. Following a complete investigation, results will be more objective and should be accomplished by follow through of properly selected corrective measures. Continued re-evaluation of the corrective measures to determine results should be done. The organized investigation will use questions commonly known as the "W" questions. Such "W" questions are Why, What, Where, When, Who and How.

The responsible conditions for our example accident just mentioned were three. These were:

1. The limb was cut too large to be properly handled with a rope.

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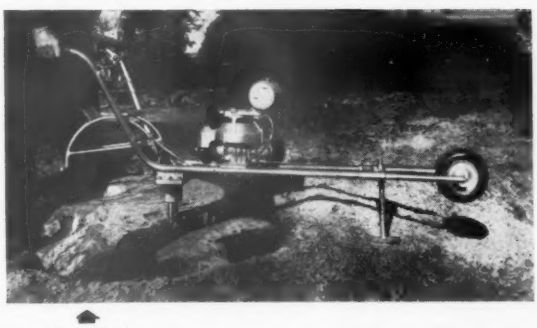

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2. The foreman recognized that the limb was too large, but thought it safe to take a chance.
3. The rope being used to lower the branch was defective which was caused by improper storage.

The corrective action indicates that the training and methods used in lowering the limbs under such conditions need to be re-examined and improved. This training will have to be given not only to the foreman, but also will involve those who participate in the work. Not only will the method itself be re-examined, but also the training techniques or abilities of the foremen to train will have to be evaluated. In other words, the trainer will have to be trained.

Since the foreman took a chance, this represents a problem in leadership. The reasons for his improper attitude will have to be established. For example, was there correct emphasis made on the importance of accident control, customer relations, public relations, costs, etc.?

So far as the rope is concerned, improper maintenance procedures were noticed. This is a clue that other inadequate maintenance procedures are occurring. The accident should lead to the consideration of the other maintenance procedures.

It should be noted at this particular point that so far as this accident is concerned, an attempt to correct "carelessness" will certainly not change the conditions which caused the accident. The correction lies only in follow through of measures which are objective as indicated by the investigation of the responsible conditions for the accident. Failure to do this can only be charged to the management.

The investigation indicates that the responsible conditions may be producing "hidden" losses in other areas of the company's operation. For example, improper training would mean that training procedures being weak will produce inadequate performance in other work being done. The maintenance of tools which was indicated in this accident may indicate losses due to inadequate maintenance of other tools. The weak leadership shown here probably is finally producing losses in all areas where leadership is a factor. All of these failures again offer opportunities to reduce the losses in the company's operations. They indicate where there is a need for improvement of operations control.

The correction of the responsible conditions which are being indicated through objective and organized investigations is the responsibility of management. The correction of the problems in our example accident will lie in the provision of certain activities which are aimed at creating better leadership, better training and finally establishment of correct maintenance procedures. Other investigations will indicate responsible conditions in other areas. In every case, however, corrective action will be aimed at the control of the company's operations. Success in operations control directly influences control of accidents.

Three Major Factors

Any company's operations basically are divided into three major factors. These are EQUIPMENT, MATERIAL and PEOPLE. Responsible conditions for losses will involve certain considerations to one or more of these factors. The example accident indicated three in number. These were training and leadership of people and maintenance of equipment. There are, however, more considerations to each of these three factors. The total considerations given to each of the three major factors are the following:

Equipment	*Material*	*People*
Selection	Selection	Selection
Arrangement	Placing	Placing
Use	Handling	Training
Maintenance	Processing	Leadership

This discussion is illustrating that in reality a safety program can achieve greatest success only through effective control of the company's operations. For that reason, the discussion was aimed at an objective analysis of in what areas operations are controlled. Accidents were stated to be simply one form of loss which indicates some failures in the control of operations. Thus any corrective action if it is objective will improve the

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operation and produce a result not only in the reduction of accident potential, but also will reduce and possibly eliminate some of the losses which are rising out of the operations. In addition, there should be an increase in the quality and quantity of work done. Personnel problems will be less frequent and less severe. Costs should be reduced. Again, more savings. Savings which will reduce net operating costs and increase the competitive advantage of the company.

Supervisors have always been recognized as an important factor in operations control. Their performance depends on certain knowledges and skills. These are:

Knowledge of work, knowledge of responsibilities

Skill in leading, skill in planning, skill in training

Carefully written manuals, etc, which outline the knowledges are useful tools. Operations control can be developed through them. Managements through carefully prepared programs can increase the skills of their supervisors.

It is through these knowledges and skills that supervisors give adequate considerations to the production factors of EQUIPMENT, MATERIALS and PEOPLE. By such performance, they ideally seek to prevent a loss rather than provide a cure after the unfortunate happens. Better managements are those who effectively fulfill the needs of their supervisors and who give adequate and timely consideration to the twelve items under EQUIPMENT, MATERIAL AND PEOPLE. Operations control is objective and responsible conditions for problems are eliminated or at least controlled.

Branches of the Law

(Continued from Page 5)

with infested trees as the Plant Board may deem advisable, provided an adequate barrier is maintained around field experimental plots by application of D-D soil fumigant at the said rate for treating infested soil, such applications to be made no less often than six (6) months apart, as looking toward the control and containment of burrowing nematodes."

The program of "pull and treat," as it is called, was initiated by the State Plant Board in September, 1955, and by July, 1956, some 2,700 acres of citrus grove property had been pulled and treated. At first the program was offered to the growers on a purely voluntary basis, with the grower signing a written release absolving the State from liability. In the spring of 1956, however, the State Plant Board initiated a compulsory program of pull and treat.

The reason for the change in policy was explained by James T. Griffiths, the production manager for a growers' association and a member of the so-called Spreading Decline Committee, a group of growers who studied the problem and made recommendations to the legislature and the State Plant Board. Mr. Griffiths said that in the spring of 1956 it was learned that federal funds would be available to supplement the state appropriation which, alone, was insufficient to complete the program, and at that time "it was decided it should be a force program primarily to get the job done within the biennial which the legislature made the appropriations for, and the pro-

(Continued on Page 24)

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Maple Diseases

(Continued from Page 7)

killed more maples than any other disease. The silver maple *(Acer saccharinum)* is the most susceptible of the streetside maples and Norway maple *(A. platanoides)*, red maple *(A. rubrum)* and sugar maple *(A. saccharum)* are decreasingly susceptible.

Wilt symptoms vary somewhat with the tree species, its age, location and other factors. Usually, there is a sudden wilting of one to several branches or of the entire tree. Young trees, especially, may collapse suddenly. The extent of symptom development seems correlated with the severity of root infection.

The wilted leaves may fall from the tree when dry or hang on for the remainder of the season. When the verticillium fungus is present, the outer sapwood shows discoloration. The color varies from olive-green to greenish-black and may occur in streaks, flecks or as solid bands. Vascular discoloration is not positive proof of the presence of this pathogen, however, and laboratory isolation is required to confirm the cause of disease.

Verticillium albo-atrum, the casual fungus, is soilborne and persists in the soil almost indefinitely. Infection presumably occurs through the roots and wounds are not necessary for root penetration. It has also been suggested that above-ground infection may occur through sapwood wounds or by contaminated pruning tools.

The pathogen colonizes the water conducting elements of the vascular tissue and sapwood discoloration and death of the tree are due to toxins produced by the fungus.

Maples that show extensive wilt symptoms usually die within a short time. In instances where only one branch is involved, the tree may survive for several seasons and, in some cases, apparently recovers. It must be assumed that the tree remains infected and that symptoms will probably reappear later. It is often standard practice to make liberal applications of readily available nitrogen fertilizer to maples showing only mild wilt symptoms to hasten recovery. It has been shown that, in some cases, heavy nitrogen fertilization may *increase* the severity of disease symptoms. At the present time, this recommendation for control is questionable.

If the arborist must make a suitable replacement for a tree killed by Verticillium wilt, he should either select a tree species not susceptible to the disease (a difficult task!) or carefully treat the soil by chemical means to eliminate the pathogen before a new planting is made. Treatment should be made several weeks or months before replanting a formaldehyde drench, Vapam or methyl bromide. It is difficult to get good soil penetration of these chemicals to the depth required and proper soil temperature and moisture are essential for good results.

Heart Rots

All maples are subject to heart rot as the trees mature and the shorter-lived silver and red maples are frequently heavily damaged. Heart rot infection occurs only when the heartwood is exposed by injury, wounds, fire scars or natural pruning. There are many different fungi involved and most are restricted to the heartwood, never attacking the living sapwood of the trunk or branches. Conspicuous conks or fruiting bodies of the fungus often appear on the tree and are important in the identification of the specific pathogen involved. In some cases, the heart rot fungus may attack the sapwood and bring about a decline and eventual death of the tree. On example of this is Ganoderma rot, caused by *Ganoderma lucidum.* This disease is reported on red and Norway maples and causes a rapid decline of infected trees. The symptoms are often accompanied by production of large, reddish, varnish-coated conks at the base of the tree or arising from infected roots.

Since infection requires bark or root injury, proper care and maintenance are essential to reduce disease incidences. Particular attention should be given to pruning cuts that expose heartwood.

Branches of the Law

(Continued from Page 23)

gram had to be stepped up faster than it was going at that time."

The total acreage planned to be pulled and treated (including the 2,700 acres already pulled and treated) was estimated to be 7,000 acres owned by an estimated 750 owners, according to the Plant Commissioner's assistant in charge of the spreading decline program throughout Florida. The total acreage of citrus grove property in Florida is estimated to be 600,000 acres.

Harry Corneal owned a seven-acre grove, containing 703 citrus trees. As applied to Corneal's property, the "pull and treat" program called for the destruction of 197 citrus trees, although only 16 trees were found to be actually affected by the burrowing nematode. Corneal brought an injunction suit in the Circuit Court of Polk County, Florida, to enjoin the State Plant Board from enforcing the provisions of the rule against him. The court held the rule to be valid and decided in favor of the State Plant Board. Corneal appealed.

The contention of Corneal was that the provision of the rule authorizing the destruction of the healthy trees in his grove constituted a taking of property without compensation in violation of both the Florida and federal constitutions. The Supreme Court of Florida accepted this contention, reversed the decision of the court below, and decided in favor of Corneal.

The Supreme Court held that:

(1) so long as the State Plant Board's plan was conducted on a purely voluntary basis and fruit owners desiring to participate signed releases in favor of the State, the State had no obligation to reimburse such owners, but

(2) where the program was put on a compulsory basis and no compensation was provided, the regulation was in excess of the bounds of the police power and constituted an unjust and unreasonable violation of the owners' organic rights.

Trees in Boxes

(Continued from Page 8)

trees, and we're hoping to work up several tremendous effects with the flowering varieties."

In an editorial in the same issue, our editor advocated using ornamental cherries, crabs and hawthorns liberally. He also noted: "The attractive form trees such as globes, columns and pyramids should be exploited to the fullest . . . the smart designers of future malls will, or should give high priority to such unusual and attractive trees. Blobs of green or just run-of-the-mine things that leave no impression, or excite admiration, will rapidly cease to interest the public and the whole exciting idea could fall flat on its young face."

The Miami Beach, Fla. Lincoln Road

Holly (Ilex Opaca) is shown in a redwood container which is bound with steel bands covered with oak strips. This planting is on Texas Ave., Houston, Tex.

A Scanlon Red Maple (Acer rubrum Scanlon P. P. 1722) in Portland, Ore. This is one of 574 trees planted in concrete boxes along 64 blocks of the downtown section. Other trees used in the Portland planting are Cleveland Maple, Almira Maple, Globe Blue Ash, Pauls Scarlet Hawthorn and Kwanzan Cherry.

Mall (TREES, Jan.-Feb. 1961) is a beautiful example of planting. John P. Paulos, Miami Beach parks superintendent and Robert G. Kundtz, city horticulturist, used many rare and striking tropical trees, shrubs and flowers.

Award of Merit

In East Orange, N. J., this year an award of merit was presented to the Shade Tree Commission by the Chamber of Commerce. Harry E. Turner, city forester, reported that the city-wide beautification program has received overwhelming acclamation from out of town motorists as well as residents and property owners in the city. Mr. Turner's crew made concrete flower boxes for business areas last winter. The boxes were planted with yews and spruce bows and later replaced with flowers. In addition to the boxes, traffic islands at intersections were planted with colorful plants and small corner areas owned by the city were made into parklets by planting flowers and installing benches for passive recreation.

Planting Good Publicity

In Columbus, Ohio, William F. Walton, arborist, and Ray S. Dietz, superintendent of parks, are finding that downtown tree tub planting is a fine publicity project. Numerous articles have appeared in the local dailies since the planting began last October. At the present time, 51 tubs have been installed and 54 more have been proposed. The containers are reinforced concrete with an outer coat of white gunnite to dress up the appearance. The cost averages $125.00 per planted tub and is borne by voluntary contributions from business interests within each planting block.

Mr. Walton said that so far, most of the downtown interests prefer deciduous trees because this type reflects the change of seasons. Most of the variety arrangement has consisted of alternating hawthorn and crabapple trees. After six months trial on the streets, no vandalism has been observed.

The latest planting reported took place in Pittsfield, Mass., June 6, where 50 mountainash trees were planted in cement tubs with geraniums and petunias at the base. The flowers were a gift of the Berkshire Museum Garden Club. The cost of the project was pledged by members of the Downtown Association. The project was instigated by the Shade Tree Commission whose chairman is Kingsley (Rex) Fall. John F. Daniels is the tree warden.

"It was our feeling, Mr. Fall said, "that our bicentennial observance was an appropriate time for a major undertaking that would enhance the appearance of the city, not only for the bicentennial year, but for a long time to come."

Tree tub plantings, flower boxes, colorful traffic islands, malls . . . these are things that visitors observe when they enter a new city. They like the fresh living appearance. Some return to their hometown with a few ideas and before long, another city is organizing a beautification-with-trees program.

Communities don't have to wait for a smog scare, a fair, a centennial or any other celebration to be inspired in this direction. Street beauty is always welcome, as response from across the country clearly indicates.

Scientists Visit Research Lab

Prominent scientists in the field of forest entomology convened recently at Delaware, Ohio to review the program of the year-old Forest Insect Research Laboratory operated by the Central States Forest Experiment Station, U. S. Forest Service.

Visiting insect experts included: Dr. J. Osmun, Head, Entomology Dept., Purdue University; Dr. Ronald Giese, entomologist, Purdue University; Dr. P. C. Stone, Head, Entomology Dept., University of Missouri; Dr. J. C. Carter, Head, Dept. Plant Pathology, Illinois State Natural History Survey; O. A. Alderman, state forester, Ohio; G. L. Butcher, state forester, Kentucky; and M. G. Hoyer, assistant state forester, Missouri. Forest service representatives in addition to the local staff were: W. L. Baker, assistant director, Div. Forest Insect Research, Washington, D. C.; L. H. Moore, Milwaukee, Wisc.

Best Wishes to
National Shade Tree Conference
Minneapolis, Minn., Aug. 20-25

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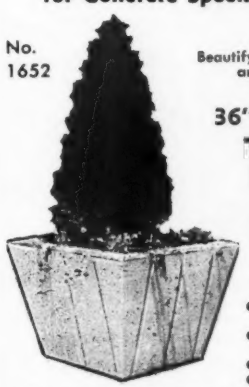

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Authors and Books

The books reviewed on this page may be ordered from TREES Magazine, 7621 Lewis Road, Olmsted Falls 38, Ohio.

DR. RALPH J. GREEN, JR.

Author of
"Root and Trunk Diseases of Maples"
Page 6

Dr. Ralph J. Green, Jr., associate professor of plant pathology at Purdue University, divides his time between teaching and research. His teaching responsibilities include the introductory courses in plant pathology, forest pathology, and soil microbiology.

Research responsibilities include the areas of special crops and diseases of shade trees and ornamentals. Since 1956 Dr. Green has served as a member of the NC-22 Regional Committee on Oak Wilt, and directs the program on Oak Wilt research and control in Indiana. At present, this includes an extensive aerial survey and control program for oak wilt in the valuable timberlands of southern Indiana.

Dr. Green has considered studies of verticillium wilt disease and the casual organism, verticillium albo-atrum Reink. & Berth., as his area of specialized interest. Extensive research in the many facets of the disease and the casual organism are in progress.

For the period 1955-1961 Dr. Green served as an Agent (pathologist) for the U.S.D.A. and is currently a collaborator in the Oilseeds and Industrial Crops Branch, U.S.D.A., in the area of special crops.

The paper published herein was first presented at the January 5, 1961 session of the Indiana Arborists Association.

K. H. DANIELS

Author of
"Save Money With A Safety Program"
Page 20

K. H. Daniels has been associated with the Hartford Accident and Indemnity Company since 1947. At the present time he is a district engineer, responsible for the loss control department in the Indianapolis district.

The material in the article prepared for TREES was basically presented as a talk before the Indiana Arborists Association, January 6, 1961. In principle, according to Mr. Daniels, it presents Hartford's approach in loss control.

Mr. Daniels graduated from Indiana Technical College with a B.S. Degree and began his career with the Phoenix London Group in Chicago. The principles presented in this article are practical and, Mr. Daniels states, ". . . will produce results if conscientiously applied. This I know from 20 years experience in this type work."

ARE YOU YOUR GARDEN'S WORST PEST? by Cynthia Westcott. Doubleday & Co., Inc., 575 Madison Ave., New York 22, N. Y. 305 pgs., illus., $4.50.

Dr. Cynthia Westcott, known to millions as "The Plant Doctor," gives some expert and excellent advice in her latest book, "Are You Your Garden's Worst Pest?"

One of the most valuable chapters is devoted to a plant-by-plant tabulation of over 300 plants, trees, and shrubs, listing the pests which attack them, the "symptoms" and damage, and the controls to use. There is also an appendix listing state quarantine regulations, federal plant quarantines, optimum pH range of nearly 400 plants, and an examination of eighty pesticides. Linecuts by Dr. Mary D. Rogick illustrate the book.

Oak Wilt In Dallas, Tex.

Oak wilt has been reported in Dallas, Tex.

In a recent communication, R. R. Cunningham of the Lambert Landscape Co., Dallas, informed us that in late May he requested a diagnosis of two oak tree specimens from Dr. O. J. Dooling, instructor at the School of Forestry, Columbia, Mo. On June 10 Dr. Dooling's report arrived and stated that both specimens were oak wilt positive.

Dr. Dooling recommended that the trees be removed and destroyed as soon as possible in an attempt to prevent spread to other trees.

Ed Brarmann Appointed To Post With Utility

E. F. Brarmann Jr.

Edward F. Brarmann, Jr., formerly superintendent of parks and shade trees for the City of Englewood, N. J., was recently appointed to the newly created position of supervisor of forestry for Jersey Central-New Jersey Power & Light Companies. The announcement was made by Robert H. Sims, electric utilities' superintendent of operations.

Mr. Brarmann will be responsible for the utilities' extensive tree trimming program on which the companies spend $1 million a year. He will also be in charge of the companies' chemical program for transmission right-of-way maintenance.

A University of Maine graduate, Mr. Brarmann is president of the New Jersey Federation of Shade Tree Commissions, a past president of the New Jersey Society of Certified Tree Experts, and a director of the National Shade Tree Conference. His new office will be located at general headquarters in Morristown.

For Your Calendar

37th NSTC, Hotel Leamington, Minneapolis, Minn., August 20-25.
American Institute Park Executives, annual conference, Rochester, N. Y., September 24-28.
20th annual short course on Roadside Development, Columbus, Ohio, October 3-6.

Hollis Howe

Hollis Howe, former city forester of Baltimore, died April 15. He had been in ill health for some time. Since his retirement as city forester Mr. Howe was associated with the Towson Nurseries, Cockeysville, Maryland.

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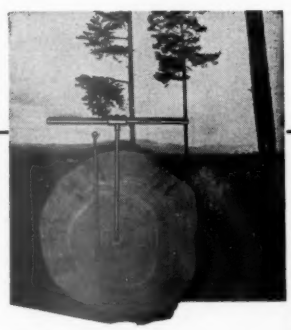

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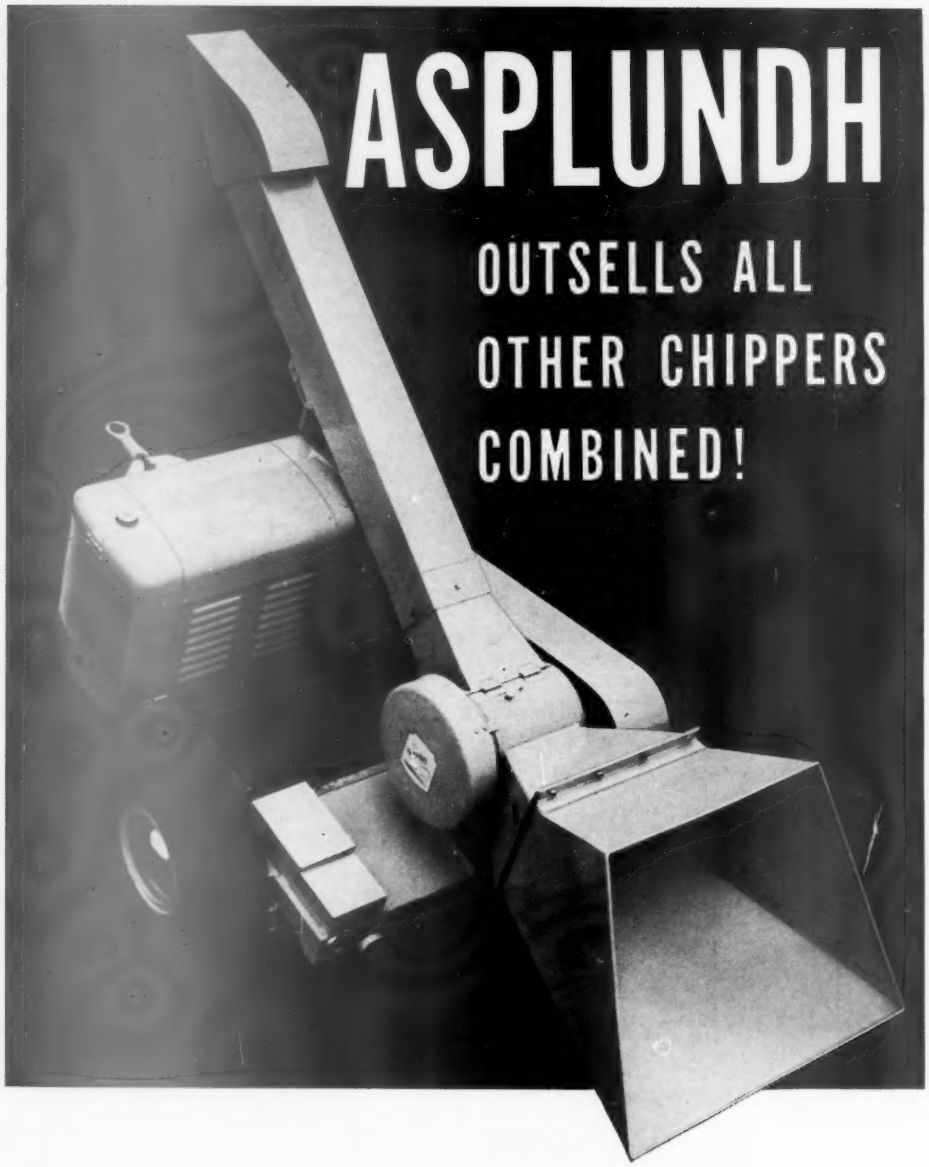

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